

Amendment and Response

Page 2 of 23

Serial No.: 10/027,226

Confirmation No.: 9039

Filed; December 20, 2001

For: METHODS AND DEVICES FOR REMOVAL OF ORGANIC MOLECULES FROM BIOLOGICAL MIXTURES USING A HYDROPHILIC SOLID SUPPORT IN A HYDROPHOBIC MATRIX

Amendments to the Specification

Please replace the paragraph beginning at page 3, line 26, with the following amended paragraph.

Yet another method of removing unwanted materials (e.g., dyes) from cycle sequencing (e.g., Sanger cycling) reaction mixtures involves the use of paramagnetic particles. One example of suitable paramagnetic particles incorporating dye terminator removal materials is available under the trade designation RAPXTRACT from Prolinx Inc., Bothell, WA. Further examples of these materials (and their methods of use) may be found in U.S. Patent Application Serial No. 09/894,810 filed on June 28, 2001 and entitled ENHANCED SAMPLE PROCESSING DEVICES SYSTEMS AND METHODS (U.S. Pat. Application Publication No. 2002/0047003 (Bedingham et al.)). Unfortunately, however, with such particles, the particles must remain in a hydrated state, which limits the ability to prefabricate particle-loaded devices.

Please replace the paragraph beginning at page 20, line 4, with the following amended paragraph.

Although the methods of the present invention can be used in a variety of devices, a variety of illustrative embodiments of some suitable devices may be described in, e.g., U.S. Patent Application Serial No. 09/894,810 filed on June 28, 2001 and entitled ENHANCED SAMPLE PROCESSING DEVICES SYSTEMS AND METHODS (U.S. Pat. Application Publication No. 2002/0047003 (Bedingham et al.)) and U.S. Patent Application Serial No. 09/895,010 filed on June 28, 2001 and entitled SAMPLE PROCESSING DEVICES METHODS (U.S. Pat. Application Publication No. 2002/0064885 (Bedingham et al.)). Other useable device constructions may be found in, e.g., U.S. Provisional Patent Application Serial No. 60/214,508 filed on June 28, 2000 and entitled THERMAL PROCESSING DEVICES AND METHODS; U.S. Provisional Patent Application Serial No. 60/214,642 filed on June 28, 2000 and entitled SAMPLE PROCESSING DEVICES, SYSTEMS AND METHODS; U.S.

Amendment and Response

Page 3 of 23

Serial No.: 10/027,226

Confirmation No.: 9039

Filed: December 20, 2001

For: METHODS AND DEVICES FOR REMOVAL OF ORGANIC MOLECULES FROM BIOLOGICAL MIXTURES USING A HYDROPHILIC SOLID SUPPORT IN A HYDROPHOBIC MATRIX

Provisional Patent Application Serial No. 60/237,072 filed on October 2, 2000 and entitled SAMPLE PROCESSING DEVICES, SYSTEMS AND METHODS; U.S. Provisional Patent Application Serial No. 60/260,063 filed on January 6, 2001 and titled SAMPLE PROCESSING DEVICES, SYSTEMS AND METHODS; U.S. Provisional Patent Application Serial No. 60/284,637 filed on April 18, 2001 and titled ENHANCED SAMPLE PROCESSING DEVICES, SYSTEMS AND METHODS; and U.S. Patent Application Serial No. 09/895,001 filed June 28, 2001 and entitled SAMPLE PROCESSING DEVICES AND CARRIERS METHODS (U.S. Pat. Application Publication No. 2002/0048533 (Harms et al.)).

Please replace the paragraph beginning at page 21, line 3, with the following amended paragraph.

A preferred method involves the use of a device with a plurality of process arrays such as those illustrated in U.S. Patent Application Serial No. 09/894,810 filed on June 28, 2001 and entitled ENHANCED SAMPLE PROCESSING DEVICES SYSTEMS AND METHODS METHODS (U.S. Pat. Application Publication No. 2002/0047003 (Bedingham et al.)). Each of the process arrays includes a number of chambers (e.g., loading chambers and process chambers such as reaction chambers or clean-up chambers) that are preferably arranged generally radially on a device (such that centrifugal forces can move fluids sequentially from chamber to chamber, for example). The chambers within each of the arrays are in fluid communication using channels or other conduits that may, in some embodiments, include valve structures to control the movement as desired.

Please replace the paragraph beginning at page 25, line 17, with the following amended paragraph.

The bottom of the process chamber 150a also includes a cover 186 attached to the surface 188 of the core 180 to enclose the volume of the process chamber 150a. Like the cover 184, it

Amendment and Response

Page 4 of 23

Serial No.: 10/027,226

Confirmation No.: 9039

Filed: December 20, 2001

For: METHODS AND DEVICES FOR REMOVAL OF ORGANIC MOLECULES FROM BIOLOGICAL MIXTURES USING A HYDROPHILIC SOLID SUPPORT IN A HYDROPHOBIC MATRIX

may be preferred that the cover 186 be attached to and seal with the core 180 using an adhesive, e.g. a pressure sensitive adhesive as described herein. It may be preferred that the cover 186 be provided in the form of a metallic layer that enhances thermal energy transfer into and out of the process chamber 150a. In some embodiments, the cover 186 may be provided in the form of a ring-shaped structure as described in, e.g., U.S. Patent Application Serial No. 09/894,810 filed on June 28, 2001 and entitled ENHANCED SAMPLE PROCESSING DEVICES, SYSTEMS AND METHODS METHODS (U.S. Pat. Application Publication No. 2002/0047003 (Bedingham et al.)).